Pyronometer Shielding
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Client: Joe Klems, EETD, x5564

Project Description:
Design and build a structure for mounting a pyronometer that also shields it from reading temperatures above the horizon. The shields must have the optimized surface properties to minimize radiative thermal transfer (maximizing emmissivity, reflectivity, etc.) to the pyronometer, while maintaining maximum durability of whatever coatings/materials are used. The final structures will be mounted outdoors in Reno, NV, where it will see large temperature fluctuations, as well as be exposed to all the elements.

Deliverables:
2 Shielding structures
3 Coupons for material surface testing
(Drawings?)

Due date(s):
Testing to begin in October
Begin the fab./process of parts by the 14th Sept.

Parts Required for each (from sketches & estimates):
¼" Al plate, roughly 12"x12"
1 Outer shield
1 (maybe 2) inner shields
1 Eave/hood,
Foil, as necessary
Spray paint (or powdercoat, etc.)
Various screws
Supplied by EETD:
Pyronometer
Thermistor

Budget/Time Estimate:
See attached document.
Total (for 2): ~$5,500, for materials + approx. 18 hours engineer/design + 48 hours fab.